DOCUMENT RESUME

ED 073 598 EC 051 387

TITLE	Educational Development and Utilization of a Composite Approach to Teaching the Exceptional.
INSTITUTION	Curricula Improvement Center, Punta Gorda, Fla.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.; Florida State Dept. of Education, Tallahassee.
PUB DATE	72
NOTE	28p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Attention Span; Behavior Change; *Educable Mentally Handicapped; *Exceptional Child Education; *Inservice Teacher Education; *Listening Skills; Mentally Handicapped; Operant Conditioning; Program Evaluation; Video Tape Recordings

ABSTRACT

Intended to reduce the occurrence of inattending behaviors in 400 educable mentally handicapped students and to increase and maintain attending behaviors, project EDUCATE is described as an inservice program to teach behavior modification techniques to 16 special education teachers. EDUCOURSE I is said to have resulted from a review of research, an analysis of videotaped classroom sessions, and an assessment of learning problems and teaching skills by exceptional child educators. The inservice course is described as consisting of a teacher handbook presenting the theoretical basis of the course and containing lesson plan aids for microteach lessons and four videotaped model lessons. Analysis of pre- and post-course videotapes of typical 15 minute classroom learning activities revealed significant achievement of the project objective by the teachers in the program. See EC 051 388 for the teacher handbook. (DB)

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ED 073595

END OF PROJECT REPORT
FY 1972
TITLE VI-B

E ducational
D evelopment and
U tilization of a
C omposite
A pproach to
T eaching the
E xceptional

EC 051 387E

CURRICULA IMPROVEMENT CENTER
CHARLOTTE COUNTY, FLORIDA

PART I

STATISTICAL DATA AND ABSTRACT

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

FEDERAL ASSISTANCE FOR THE EDUCATION OF HANDICAPPED CHILDREN UNDER P.L. 89-313, AMENDMENT TO TITLE I, ESEA; AND PARTS B, C, AND G, EHA

PART I - PROJECT APPROVAL, STATISTICAL DATA AND ABSTRACT

FORM APPROVED
O.M.B. NO. 51-R0803

1. STATE EDUCATIONAL AGENCY ACTION (To be completed by State educational agency)

STATE CODE (A)	STATE PROJECT NUMBER (B)	SEA CLASS (C)	DATE APPROVED (D) Month	Day	Year	AMOUNT APPROVED (E)	ALLOCATED FROM FEDERAL FY (F)	2. MAINTENANCE OF FISCAL EFFORT: SECOND PRECEDING FISCAL YEAR (A)	FIRST PRECEDING FISCAL YEAR (B)
A						$	19__	$	$

3. APPLICANT AGENCY

(a) NAME OF ADMINISTRATOR (Last, first, middle initial): Dr. Benner, Thomas E.

(b) NAME OF AGENCY: School Board of Charlotte County

(c) NUMBER AND STREET: 1016 Education Avenue

(d) CITY: Punta Gorda | (e) STATE: Florida | (f) ZIP CODE: 33950

(g) COUNTY: Charlotte

TELEPHONE: (h) AREA CODE: 813 | (i) NUMBER: 639-2121 | (j) EXTENSION:

(k) CONGRESSIONAL DISTRICT NUMBER: 7

4. PROJECT DIRECTOR

(a) NAME OF DIRECTOR (Last, first, middle initial): Hornsby, Carl E.

(b) NAME OF SCHOOL OR BUSINESS: Curricula Improvement Center

(c) NUMBER AND STREET: 1300 Cooper Street

(d) CITY: Punta Gorda, | (e) STATE: Florida | (f) ZIP CODE: 33950

(g) COUNTY: Charlotte

TELEPHONE: (h) AREA CODE: 813 | (i) NUMBER: 639-3862 | (j) EXTENSION:

5. PROJECT DURATION

	Month	Day	Year
(a) FROM	7	1	71
(b) TO	6	30	72

6. TITLE OF PROJECT (Limit to 50 characters, including punctuation and spaces): EDUCATE

7. LEGISLATIVE FUNDING AUTHORITY	CHECK ONE	8. OTHER FUNDING SOURCES		9. TYPE OF FORM	CHECK ONE
(a) P.L. 89-313		(a) Local	$	(a) Application	
(b) PART B, EHA	X	(b) State		(b) Application Amendment	
(c) PART C, EHA - D-B		(c) Other Federal title (Specify)			
(d) PART C, EHA - ECE		(1) Title III, ESEA	55,458.00	(c) Report	X
(e) PART G, EHA		(2)		(d) Report Amendment	
(f) OTHER (Specify)		(3)			
		(d) Other			
		(e) TOTAL	$ 55,458.00		

10. (a) SIGNATURE OF AUTHORIZED OFFICIAL: Thomas E. Benner

(b) DATE: August 9, 1972

11. OE USE ONLY

School District Code	
Vendor Code	

OE FORM 9025, 1/72 REPLACES OE FORM 9025, 12-70, WHICH IS OBSOLETE

12. PROJECT EXPENDITURES

(APPLICATION – Give estimated dollar amount of Federal funds required. REPORT - Give actual expenditures and unliquidated obligations.)

A. BY EXPENDITURE ACCOUNTS (See OE Handbook II)	SALARIES (a)	CONTRACTED SERVICES & OTHER EXPENDITURES (b)	TOTAL AMOUNT (c)	B. BY TYPE OF HANDICAPPED CHILDREN BENEFITING	AMOUNTS (d)
ABCD (1) Administration (100)	$ 5,250.00	$ 673.37	$ 5,923.37	(1) Trainable Mentally Retarded	$
(2) Instruction (200)	14,805.00	9,080.92	23,885.92	(2) Educable Mentally Retarded	33,661.24
(3) Attendance Services (300)				(3) Learning Disabled	
(4) Health Services (400)				(4) Emotionally Disturbed	
(5) Pupil Transportation (500)				(5) Other Health Impaired	
(6) Operation of Plant (600)		400.00	400.00	(6) Crippled	
(7) Maintenance of Plant (700)		1,000.00	1,000.00	(7) Visually Handicapped	
(8) Fixed Charges (800)		1,511.95	1,511.95	(8) Deaf-blind	
(9) Food Services (900)				(9) Deaf	
(10) Student Body Activities (1000)				(10) Hard of Hearing	
(11) Community Services (1100)				(11) Speech Impaired	
(12) SUB-TOTAL (100 thru 1100)	$ 20,055.00	$ 12,666.24	$ 32,721.24	(12) TOTAL HANDICAPPED	$ 33,661.24
(13) Sites (1210)				C. BY SPECIAL CATEGORIES	
(14) Buildings (1220C)				(1) Title I ESEA Activities	$
(15) Remodeling (1220C)				(2) Voc-ed Project Activities	
(16) Equipment for Instruction (1230C)			940.00	(3) Inner City Project Activities	
(17) Other Equipment (1230 except C)				(4) Minority Group Project Activities	
(18) CAPITAL OUTLAY (1200 series) SUBTOTAL			$ 940.00	(5) Inservice Training of Staff	
(19) GRAND TOTAL (Sum of both sub-totals)			$ 33,661.24	(6) Parent Services	

13. PROJECT PARTICIPANTS

	TYPE OF HANDICAPPED CHILDREN SERVED	A. CHILDREN RECEIVING SERVICES: NUMBER OF CHILDREN SERVED 0-2 YEARS (a)	3-5 YEARS (b)	6-9 YEARS (c)	10-12 YEARS (d)	13-18 YEARS (e)	19 AND OVER (f)	TOTAL (g)	TOTAL SCHOOL DAYS (h)	B. PROJECT PERSONNEL PAID FROM FEDERAL PROJECT FUNDS: NUMBER OF PERSONNEL PAID TEACHERS (i)	TEACH. AIDES (j)	OTHER PERS. (k)	TOTAL PERS. (l)	MAN WEEKS PURCHASED (m)	C. PERSONNEL RECEIVING INSERVICE TRAINING FROM FEDERAL PROJECT FUNDS: NUMBER OF PERSONNEL TRAINED TEACHERS (n)	TEACH. AIDES (o)	OTHER PERS. (p)	TOTAL PERS. (q)	CLOCK HOURS PROVIDED (r)
A	(1) Trainable Mentally Retarded																		
B	(2) Educable Mentally Retarded		5	100	108	186	3	400	80			1.83	1.83	86.66	40	15	5	60	1800
C	(3) Learning Disabled																		
D	(4) Emotionally Disturbed																		
E	(5) Other Health Impaired																		
F	(6) Crippled																		
G	(7) Visually Handicapped																		
H	(8) Deaf-blind																		
I	(9) Deaf																		
J	(10) Hard of Hearing																		
K	(11) Speech Impaired																		
L	(12) TOTAL		5	100	108	186	3	400	80			1.83	1.83	86.66	40	15	5	60	1800

M

D. CHILDREN RECEIVING SERVICES BY DEMOGRAPHIC AREA	NUMBER (s)
(1) From inner city areas	
(2) From other urban areas (over 50,000)	
(3) From rural areas (under 2,500)	
(4) From other demographic areas (From 2,500 to 50,000)	400
(5) TOTAL (Lines D. (1)-(4))	400

E. MISCELLANEOUS INFORMATION

	(t)		(u)
(1) Children participating in preschool activity in this project	5	(6) Number of American Indian children involved in this project	4
(2) Students participating in voc-ed activity in this project		(7) Number of Negro children involved in this project	189
(3) Multihandicapped children for whom components of this project were especially designed		(8) Number of Oriental children involved in this project	
(4) Children enrolled in nonpublic schools		(9) Number of Spanish surnamed children involved in this project	32
(5) Additional children receiving only incidental services (not previously reported in this form)	192	(10) Number of parents receiving direct services through project funds	
		(11) Number of non-paid volunteers participating in this project	16

14. ABSTRACT *(Limit to the number of lines and space provided)*

OBJECTIVES

The principal objective of project EDUCATE was to reduce the occurrence of special education students' behaviors which interfere with attention, and reciprocally to elicit and maintain students' attending behaviors. Supporting objectives for teachers included the development of skills to (1) assess interfering behaviors, (2) elicit attending behaviors, (3) use teacher-attention to modify behavior, and (4) devise and implement a reinforcement system.

ACTIVITIES

A review of research on the learning behavior of EMR children, analysis of videotaped sessions in special education classrooms, and assessment of the perceived learning problems and teaching skills by project-area exceptional child educators preceded the development of project objectives. EDUCOURSE ONE-- an inservice program to train teachers in specific skills designed to reduce student interfering behavior--was then developed, field tested, and revised. The program consists of a teacher handbook which presents the theoretical basis of the course and contains lesson plan aids for microteach lessons, and four videotaped model lessons. Feedback from a preliminary field test and main field test contributed to a major revision of the teacher handbook and several revisions of the model lesson videotapes.

EVALUATIONS

Pre and post-course videotapes were made of typical 15 minute classroom learning activities for the 16 teachers in the main field-test of EDUCOURSE I. Analysis of tapes by 3 raters indicated the principal project objective was achieved by completion of the program (in 9 cases differences between pre and post-tapes were significant at the .001 level; in 4 cases at the .01 level; in 1 case at the .02 level, and in 1 case at the .2 level). Continuous in-progress evaluations were made of EDUCOURSE I content and techniques.

DESCRIPTORS *(Enter the number only of terms selected from ASIS Retrieval Terms Directory. See Instructions)*

NUMBER
010
016
023
001

GSA DC 72-8497

PART II

DESCRIPTION OF PROJECT
OBJECTIVES, ACTIVITIES, AND EVALUATION

I. STATEMENT OF MAJOR PROJECT OBJECTIVE

The primary objective of project EDUCATE was to (1) reduce the occurrence of student behaviors which interfere with attention, and (2) elicit and maintain student attending behavior.

The inservice training program, EDUCOURSE ONE, is designed to train teachers of EMR classes in the systematic application of teaching techniques which will eliminate student behaviors which interfere with attention and which will maintain attending behavior. EDUCOURSE ONE centers upon a well-defined and documented set of specific skills and procedures for inservice education. The skills are interrelated and comprised of four separate instructional sequences, each consisting of three steps: (1) instruction, during which the teacher reads a prepared handbook lesson and views instructional/model videotapes; (2) microteaching, in which the teacher prepares and practices the skills in a controlled situation and evaluates his performance through videotape playback; and (3) reteaching, during which he further practices and reinforces the use of the prescribed skills through practice and evaluation. The rationale for such a procedure focuses upon specific rather than general teaching skills, short lessons with few students, direct practice and experience, and immediate reinforcement from videotaped replays.

EDUCOURSE ONE is a completely self-contained, field-tested, and evaluated package for inservice training of special education classroom teachers.

2. DESCRIPTION OF ACTIVITIES TO ACCOMPLISH OBJECTIVE

RESEARCH AND DATA GATHERING

Preliminary research and data gathering toward identification and definition of the content emphasis of EDUCOURSE ONE depended upon a review of research relevant to the learning behavior of EMR children, informal interviews with exceptional child educators, and analysis of videotaped sessions in special education classrooms. The primary purpose of these activities was to isolate, through considerations of fundamental learning principles and general learning characteristics of mentally retarded children, possible areas of content emphasis for the inservice training program. Information obtained in these preliminary efforts was used as the basis for instruments to determine learning behaviors specific to EMR children in the five-county area which this project serves, and then to identify instructional skills critical to successful learning for these children.

LEARNING PROBLEMS INVENTORY

The first such instrument consisted of an inventory of learning problems, to which exceptional child educators in the five-county area responded. The Inventory, which was adapted from Hewett's "Developmental Sequence of Educational Goals," a framework describing the essential

behaviors and competencies children must possess to learn successfully in school, lists educational problems generally attributed to exceptional children. Teachers were asked to assess these as learning problems actually representative of the particular students whom they teach, and to indicate the student behaviors occurring in their classrooms which interfered with effective instruction.

The learning problems most frequently indicated as occurring in their classrooms by the twenty exceptional child educators who responded to this instrument were, in descending order of prevalence, as follows:

Prevalence Ranking	Item No.	Statement of Problem
1	14	Children are disruptive in group.
2	11	Children respond to tasks for only limited periods of time.
3	6	Children do not retain and use instruction.
4	12	Children do not follow directions.
5 (a)	1	Children do not pay attention to learning tasks.
(b)	3	Children engage in repetitive behaviors which interfere with learning.
(c)	8	Children maintain a constricted level of performance.
(d)	9	Children exhibit a narrow range of learning interests.
(e)	15	Children do not finish learning tasks.
6	20	There is a discrepancy between children's capacities and functioning levels in intellectual and academic skills

Once the results of the Learning Problems Inventory were tabulated, exceptional child educators from Charlotte, DeSoto, Glades, Hardee, and Hendry counties participated in a workshop to discuss the implications

of these results in terms of improving education for exceptional children. During this interaction, the instructional problems indicated as most serious were those of managing disruptive behavior and initiating and sustaining attention and response to learning tasks. This information was consistent with the results of the Learning Problem Inventory, and teacher analysis and exemplification of learning problems contributed to a more meaningful interpretation of the Inventory.

Discussion of specific instances of classroom learning problems indicated that such problems may occur as the function of several factors. The observed high occurrence of non-academic, disruptive, or off-task behaviors and the corresponding low-frequency of academic or on-task behaviors were considered in terms of classroom conditions which encourage or set the occasion for improper responses, academic programs which do not provide positive learning responses, and ineffective or inconsistent use of reinforcement.

Among the classroom conditions which may be casual factors in the occurrence of students' off-task behavior is the prevailing organization of the classroom into small-group instructional situations. This organization necessitates reoccurring major changes, in terms of both physical movement and psychological transitions, in learning activities. That children in such situations are often disruptive and do not follow directions or respond to the task indicates a need for teacher-training in techniques of group management, including those related to giving effective directions and promoting group involvement,

to facilitate on-task learning behavior.

In the development of EDUCOURSE ONE, teaching skills selected for inclusion were those aimed at eliminating these problems by promoting on-task student behaviors, as well as reducing off-task behaviors. The context of occurrence of learning problems specific to exceptional children in the five-county area indicated that the areas of instructional skills most directly related to these problems were those of group management, task structuring, and behavior modification.

TEACHING SKILLS INVENTORY

With the identification of group management, task structuring, and behavior modification as areas of content emphasis for EDUCOURSE ONE, it was important to assess teacher competencies in techniques related to these categories.

A second instrument, a self-report inventory of teaching skills, was administered to teachers in the five-county area. In this Teaching Skills Inventory, the items of which correlated with the Learning Problems Inventory, teachers were asked to assess their own competencies in terms of instructional skills relevant to the alleviation of specific learning problems.

The 24 teachers who responded to this Inventory assigned their lowest competencies to the following skills:

Competency Ranking*	Item No.	Statement of Teaching Skill
1	5	Ability to get children to persevere on tasks.
2	9	Ability to ignore behavior irrelevant to learning.
3	6	Ability to get children to follow directions.
4	4	Ability to create an interest for learning.
5 (a)	11	Ability to individualize instruction.
(b)	13	Ability to sustain interest in a learning activity.
6	15	Ability to communicate to children what is expected of them in terms of appropriate responses to learning tasks.
7 (a)	2	Ability to get children to pay attention to teacher.
(b)	3	Ability to initiate a learning task.

*Number 1 indicates skill to which lowest competency was assigned.

As a result of experiences in their own classrooms, exceptional child educators in the five-county area perceived major learning problems of their children as a tendency for disruption in group settings, limited task response, inability to retain and use instruction, and inability to follow directions. The teachers' rank-ordered perceptions of their lowest competencies in teaching skills included such abilities as getting children to persevere on tasks, ignoring behavior irrelevant to learning, getting children to follow directions, and helping them to become more enthusiastic about learning.

On the basis of information obtained from both inventories relevant to specific learning problems of exceptional children, and perceived existing teacher competencies in alleviating these problems, the content emphases of EDUCOURSE ONE were identified and specific instructional skills for inclusion in the program were selected.

PACKAGING EDUCOURSE ONE

During the 1970-71 school year the first version of EDUCOURSE ONE was completed. The "package" contained a teacher handbook with an introduction, 5 chapters or instructional lessons, and a series of 5 videotaped instructional/model lessons. The handbook presented the theoretical bases of the course, provided explanations and suggestions regarding each teacher behavior presented in the course, contained lesson plan aids for microteach and reteach lessons, and contained evaluation forms to measure teacher acquisition of skills and improvements in student attending behavior. The videotaped model lessons contained segments in which a model teacher was shown conducting a lesson in which each technique was demonstrated several times. While viewing the model lessons the teacher's attention was focused on major points by cues and narrator comments as these points were illustrated by the model teacher.

PRELIMINARY FIELD TEST

The preliminary field test was begun in September, 1971 with 3 TMR teachers at Ft. Ogden School in DeSoto County; 3 regular classroom teachers at West Elementary School in DeSoto County; and 1 EMR teacher from Lee County, 1 from Pinellas County, and 2 from the project area.

Videotaped Model Lessons: Field test teachers indicated to the staff that they were experiencing some difficulty in properly identifying the examples of skills shown in the vidoetaped model lessons. To check this further a group of 20 special education teachers in the project area

who were not involved in the preliminary field test were asked to identify the skills shown in the model lessons in the first 2 instructional sequences.

The following tables indicate the responses of those 20 teachers to the videotapes in terms of "recognizing interfering behaviors," "identifying reinforcing outcomes," and "eliciting attending behavior."

RECOGNIZING INTERFERING BEHAVIORS

BEHAVIORS	NUMBER OF EXAMPLE									
	1	2	3	4	5	6	7	8	9	10
GROSS MOTOR						* 18			1	
NOISE MAKING					* 19				* 19	1
VERBALIZATION	* 20							* 19		
ORIENTING				* 20		2	1			* 19
AGGRESSION			* 20		1		* 19	1		

picture interruption

* indicates correct example for each category

Handbook Materials: Field-test participants were also questioned about the quality of the Handbook.

ORIGINAL HANDBOOK EVALUATION
Preliminary Field Test (n=10)

Handbook	Seq.#1 Yes	Seq.#1 No	Seq.#2 Yes	Seq.#2 No	Seq.#3 Yes	Seq.#3 No	Seq.#4 Yes	Seq.#4 No	Seq.#5 Yes	Seq.#5 No
Each skill was clearly defined	10	0	10	0	10	0	9	1	10	0
Objectives were clearly stated	9	1	10	0	9	1	10	0	9	1
Organization and sequence of skills were realistic and appropriate	9	1	8	2	10	0	7	3	9	1
Instructions for microteach lessons were clear and easily followed	7	3	3	7	8	2	5	5	7	3
Recording forms were clear	9	1	10	0	10	0	10	0	10	0
Recording forms were appropriate and easy to mark	9	1	10	0	9	1	10	0	9	1

As a result of these data, along with many written comments and verbal suggestions, instructions for the microteach lessons were revised and the sequence and number of skills eventually were reorganized. The principal criticisms of the Handbook emerging from the preliminary field-test were that it was too long and detailed and in several instances the content was overlapping. Consequently, the skills contained in the original Sequences 4 and 5 were combined, and the Handbook rewritten to include an introduction and only four instructional sequences.

The 3 checklists indicated considerable difficulty on the part of the 20 EMR teachers in identifying the appropriate skills shown in the model lessons, particularly in relation to "eliciting attending behaviors."

Reports submitted by the 10 field-test participants evaluating the original videotapes gave support to the need for revision of the materials.

ORIGINAL VIDEOTAPE EVALUATION
Preliminary field test (n=10)

Videotape Lessons	Seq. #1 YES	NO	Seq.#2 YES	NO	Seq.#3 YES	NO	Seq.#4 YES	NO	Seq.#5 YES	NO
Examples are clear and easily identified	7	3	8	2	6	4	9	1	9	1
Organization and models shown agree with handbook discussion	6	4	7	3	9	1	8	2	10	0
Model lesson was helpful in planning and conducting microteach session	7	3	10	0	9	1	9	1	9	1

Much of the material in the first model lesson videotapes had been dubbed twice from original tapes, and the technical quality was poor as a result. Because of this and the difficulties experienced by both the field-test participants and the project area EMR teachers, a decision was made to redo the videotapes while the preliminary field test was still in progress so as to make the examples of skills more explicit and improve the general quality of the product.

IDENTIFYING REINFORCING OUTCOMES

	NUMBER OF EXAMPLE				
OUTCOMES	1	2	3	4	5
TEACHER-ATTENTION		* 20	* 13		
PEER-ATTENTION	* 20			3	* 20
OTHER			7	* 17	

*indicates correct example for each category

ELICITING ATTENDING BEHAVIOR

	NUMBER OF EXAMPLE									
BEHAVIORS	1	2	3	4	5	6	7	8	9	10
DISCUSSING	* 14	1	* 11		* 15	1	* 15		5	* 9
ELICITING EXAMPLES	6	* 19	9	1	4	* 18	4	1	* 14	10
ESTABLISHING RULES				* 19	1	1	1	* 19	1	1

*indicates correct example for each category

MAIN FIELD TEST

Sixteen EMR teachers were involved in the main field test -- 8 from the Nina Harris Exceptional Child Education Center in St. Petersburg, 4 from the Volusia Avenue Elementary School in Daytona Beach, and 4 from the Euclid Avenue Elementary School in Deland. These participants were requested to evaluate the videotaped instructional lessons and the Handbook.

Videotaped Model Lessons: Their evaluation of the model lessons indicated quite definitely that the revision of the original videotapes had been both necessary and beneficial. In only 7 instances out of 192 possibilities were the responses of the participants negative.

REVISED VIDEOTAPE EVALUATION
Main Field Test (n=16)

Videotape Lessons	Seq. #1		Seq. #2		Seq. #3		Seq. #4	
	Yes	No	Yes	No	Yes	No	Yes	No
Examples are clear and easily identified	16	0	12	4	16	0	16	0
Organization and models shown agree with Handbook discussion	16	0	16	0	16	0	16	0
Model lesson was helpful in planning and conducting microteach session	15	1	15	1	16	0	15	1

While these data indicated that the new examples were clear and the skills were demonstrated explicitly, the field-test teachers noted that the model teacher and the students were too formal and the classroom scenes appeared to be staged. As a result of these criticisms, the scripts were rewritten and all of the videotaped instructional sequences were revised subsequent to the main field test.

Handbook Materials: Field-test teachers indicated almost unanimously that the various Handbook lessons and forms as rewritten were clearly stated and defined and also appropriate as to content.

REVISED HANDBOOK EVALUATION
Main Field Test (n=16)

Handbook	Seq. #1 Yes	Seq. #1 No	Seq. #2 Yes	Seq. #2 No	Seq. #3 Yes	Seq. #3 No	Seq. # 4 Yes	Seq. # 4 No
Each skill was clearly defined	16	0	16	0	16	0	16	0
Objectives were clearly stated	16	0	16	0	16	0	16	0
Organization and sequence of skills were realistic and appropriate	16	0	16	0	15	1	15	1
Instructions for micro-teach lessons were clear and easily followed	15	1	16	0	16	0	16	0
Recording forms were clear	16	0	16	0	16	0	16	0
Recording forms were appropriate and easy to mark	16	0	16	0	15	1	15	1

General Evaluation: Field-test teachers were asked at the end of the course to compare EDUCOURSE I with other inservice training experiences to which they had been exposed. Five of the participants believed it was "much better than," 6 reported it was "better than," and 5 indicated it was "on a par with" other inservice programs they had experienced. It was interesting to note that all of the 4 teachers from one of the participating schools felt it was "on a par with" other programs. They stated that they were already using the reinforcement and reward methods involved in behavior modification.

3. EVALUATION OF PROJECT

The major objective of the project was to (1) reduce the occurrence of student behaviors which interfere with attention, and (2) elicit and maintain student attending behavior. Since the latter (2) is primarily a reciprocal of the former (1), the evaluation of student behavioral outcomes was based on a measurement of interfering student behaviors which occurred in a typical classroom learning situation before and after EDUCOURSE I was completed by the 16 teachers who participated in the main field-test.

In the spring of 1972 participating teachers were given the following instructions:

> Plan an instructional lesson. The academic content of the activity is not significant; however, it should provide an opportunity for all students to actively participate. The activity should last for fifteen minutes. Your directions to the students should be recorded at the beginning of the tape.
>
> When you have completed the tape, record the information indicated below:
>
> DATE OF RECORDING_____
>
> NATURE OF INSTRUCTIONAL TASK_____
>
> NUMBER OF STUDENTS INVOLVED_____
>
> TYPE OF PARTICIPATION REQUIRED_____

Technical arrangements were made for 15 minute videotapes to be completed for learning activities in each of the 16 classrooms. The week after pre-course videotaping was completed, the project was begun, it lasted for a 3-week period. A rotating substitute teacher was employed to allow the field-test teachers time to take the course. During the week after completion of the course, post-course videotapes were made in the same classrooms and under the same conditions as the pre-course tapes.

The tapes were analyzed by 3 raters who were instructed to make a tally of each occurrence of an interfering behavior. Raters were presented with the following classification for interfering behaviors (taken from page 26 of the Handbook).

INTERFERING BEHAVIORS

Classifications	Specific Behaviors
1. Gross Motor	getting out of seat walking around hopping, skipping, jumping moving desk to neighbor rocking desk flailing arms
2. Noise Making	clapping hands tapping feet tapping pencil or other object rattling or tearing paper
3. Verbalization	whistling or singing laughing crying calling out to teacher making extraneous comments talking with other children
4. Orienting	turning head or body toward another person looking at another child looking at objects showing objects to another child
5. Aggression	pushing or shoving hitting or kicking poking with objects grabbing objects or work knocking books off desk throwing objects

The field-test teachers had been selected originally on the basis of the availability of at least 4 special education (EMR) teachers in one school in a Florida district that was willing to cooperate with the testing procedures. Pinellas County furnished one school with 8 teachers, and Volusia County two schools with 4 teachers each.

The 3 Videotape "raters" included the field-test classroom teacher (each rating his own tape) and 2 graduate students in special education at the University of Miami. There was considerable difference among the raters in terms of the gross number of interfering behaviors tallied, but the relative proportion of tallies between the pre and post tapes was fairly consistent. Using Ebel's interclass correlation coefficient formula for interrater reliability $r_{kk} = \frac{Vp - Ve}{Vp}$ the following reliability scores were obtained for different samples of the ratings for interfering behaviors.

INTERRATER RELIABILITY
(n=3)

Sample	r
Gross Motor (pre + post)	.91
Gross Motor (pre)	.78
Gross Motor (pre-post)	.82
Aggression (pre)	.82
Verbalization (pre-post)	.55

The following 3 tables indicate the differences found by the 3 raters between the pre-course and post-course tapes. The differences were significent at the .01 or .001 level in all but two cases and illustrate the high success of the program in terms of achieving its major objective.

Put another way, the reduction in the number of student interfering behaviors was 63 per cent for the gross motor category, 54 per cent for noise making, 59 per cent for verbalization, 49 per cent for orienting, and 41 per cent for aggression.

There were certain variables present in the tapes and in the rating procedures which should be mentioned.

1. The teacher-rater only viewed the tapes once in making tallies and consequently recorded considerably less behaviors than the other 2 raters. The 2 graduate students, in addition to viewing the tapes several times, also had the advantage of greater training and background in this type of procedure.

2. In some cases the teacher was out of camera range and it was difficult to tell whether the child was responding to him or was not attending.

3. Pre and post tapes were taken from different angles (e.g., front view or rear view) which may have accounted for some differences.

4. Pre tape lessons more often consisted of independent study activities for children while post tape lessons were more often teacher-directed. This factor may have contributed to the extent of the differences between the 2 sessions.

5. A post-course tape made several weeks following the program might have yielded considerably less differences than one taken a week later. The spring closing of schools prevented this sort of measurement being taken.

DIFFERENCES IN STUDENT INTERFERING BEHAVIORS BEFORE AND AFTER EDUCOURSE I
First Rater (n=16 classes)

Interfering Behavior	Mean Scores Pre-Course	Post-Course	D	t'
Gross Motor	697	267	430	5.00*
Noise Making	378	176	202	3.79**
Verbalization	807	305	502	4.06**
Orienting	643	362	281	3.23**
Aggression	39	29	10	1.43***

1 A statistical test to determine whether two mean scores are significantly different.

*$p < .001$ ** $p < .01$ ***$p < .20$

(p indicates the probability that a difference in mean scores occurred by chance. For example, $p < .001$ indicates that there is only one chance in a thousand that the difference between pre- and post course measures would have occurred by chance).

DIFFERENCES IN STUDENT INTERFERING BEHAVIORS BEFORE AND AFTER EDUCOURSE I
Second Rater (n=16 classes)

Interfering Behavior	Mean Scores Pre-Course	Post-Course	D	t
Gross Motor	280	96	184	5.48*
Noise Making	173	77	96	5.66*
Verbalization	253	116	137	4.10*
Orienting	257	119	138	3.60**
Aggression	58	28	30	2.67***

* $p < .001$ ** $p < .01$ *** $p < .02$

DIFFERENCES IN STUDENT INTERFERING BEHAVIORS BEFORE AND AFTER EDUCOURSE I
Third Rater (n=16 classes)

Interfering Behavior	Mean Scores Pre-Course	Post-Course	D	t
Gross Motor	654	238	416	6.67*
Noise Making	346	162	184	5.73*
Verbalization	562	234	328	7.02*
Orienting	502	233	269	6.14*
Aggression	48	16	32	3.58*

* $p < .001$